



Forecast guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 21st May 2007

**AFRICAN DESK
CLIMATE PREDICTION CENTER
National Centers for Environmental predictions
National Weather Service
NOAA
Camp Springs MD 20746**

FORECAST DISCUSSION 14H00 EST 21st May 2007

Valid: 00Z 22nd May 2007- 00Z 24th May 2007.

FLOW AT 200MB

At T+24 hrs, the general flow pattern over Southern Africa (South of the Equator) shown by the GFS, ECMWF and UK-MET models indicates a trough over the southern parts of the sub continent, with a closed circulation near 39°S 30°E associated with northwesterly stream up to 120 kt, causing convergence over southeastern parts of the sub continent. A shallow trough to the northwest of the northern coast of Madagascar is causing convergence over these areas. A high pressure system cell centered above northeastern D.R. Congo is causing divergence over the rest of the sub continent.

At T+48 hrs, the trough which was over the southern parts of the sub continent is slightly shifting eastward. The shallow trough which was to the northwest of the northern coast of Madagascar has shifted eastward, weakening in amplitude. Divergence prevails over the rest of the sub continent.

At T+72 hrs, there is no significant change in the general flow pattern except that the trough which was above the southeastern parts of the sub continent has shifted eastward, weakening, and the winds has also weakened.

FLOW AT 500MB

At T+24 hrs, the GFS models show a upper level trough above southeastern parts of the sub continent, causing convergence over these areas. Convergence can also be seen over northeastern coast of Mozambique, due to a shallow trough. The Mascarene high with three cells, centered at 31°S 70°E, at 13°S 58°E and over southern D.R. Congo (5°S 21°E), is ridging the central and the northern parts of the sub continent. There is a sub tropical high pressure cell, centered further south of South African coast (46°S 22°E), ridging the southwestern parts of the sub continent, but causing onshore flow along the southern coast of South Africa.

At T+48 hrs, the upper level trough which was over the southeastern parts of the sub continent is slightly shifting eastward, as the sub tropical high progress's northeastward,

ridging in from the south. Convergence over northeastern coast of Mozambique is maintained. The coast of Kenya is under convergence, due to a southeasterly trough. The rest of the sub continent is under divergence of the Mascarene high.

At T+72 hrs, the upper level trough which was over the southeastern parts of the sub continent has shifted eastward stretching into central Mozambique. The sub tropical high pressure system has shifted eastward. There is a trough over the Atlantic Ocean, approaching the southwestern coast of the sub continent. Over the rest of the sub continent, there is no significant change in the general flow pattern.

FLOW AT 850MB

At T+24 hrs, there is a trough to the southeastern coast of the sub continent associated to a deep low near 29°S 40°E and cyclonic winds up to 45 kt, thus isolated thundershowers and gale force wind is expected over areas which are to the south of 27°S latitude but to the east of 32°E longitude. Areas of convergence can be seen over the southwestern coast of Angola, due to a cut-off low. Areas which are to the north of 8°S latitude are under convergence due to a southeasterly trough, which is sustained by divergence on 200 mb and convergence in the 500 mb. The Mascarene high pressure cell centered at 32°S 70°E is throwing a ridge into the northeastern parts of the sub continent and causing onshore flow regime along the coast of Madagascar and Tanzania. A sub tropical high pressure system, centered at 29°S 13°E is ridging the most of the sub continent.

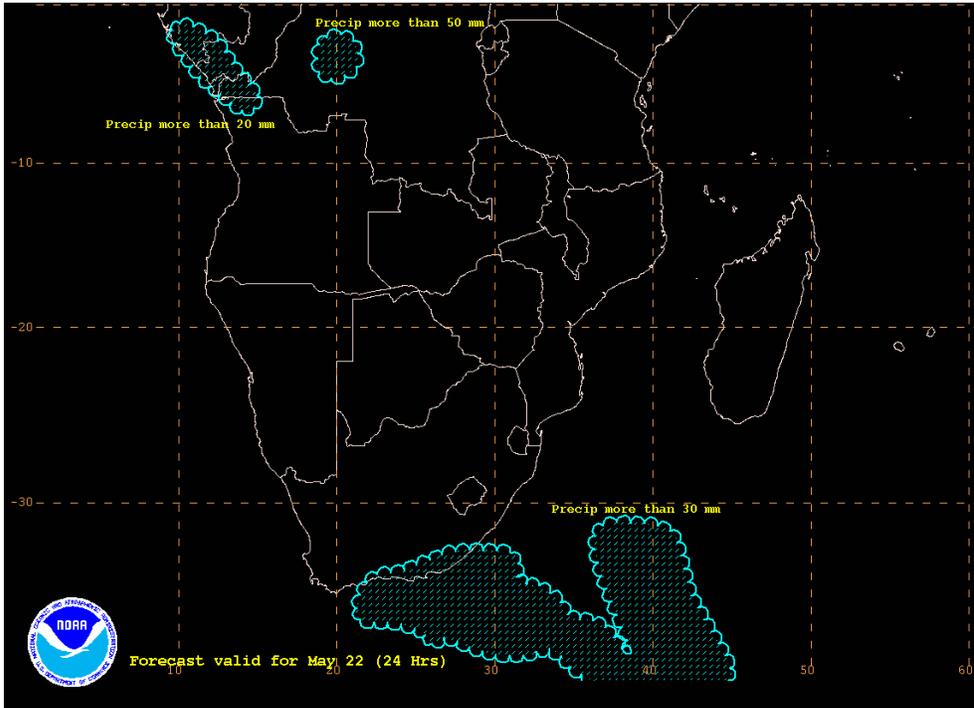
At T+48 hrs, the trough which was to the southeastern coast of the sub continent has shifted eastward as the sub tropical high shifts eastward ridging in from the south and causing onshore flow along the southeastern coast of the sub continent. Over the rest of the sub continent, there is no significant change in the general flow pattern.

At T+72 hrs, the trough which was to the south of the Mozambican Channel is shifting eastward. Slight convergence over the southwestern coast of Angola is maintained. The sub tropical high is ridging the southern parts of the sub continent. The St Helene high with two cells centered at 29°S 15°W and at 35°S 0° longitude, is hardly ridging the southwestern coast of South Africa. Anticyclonic flow prevails over the rest of the sub continent, hence subsidence.

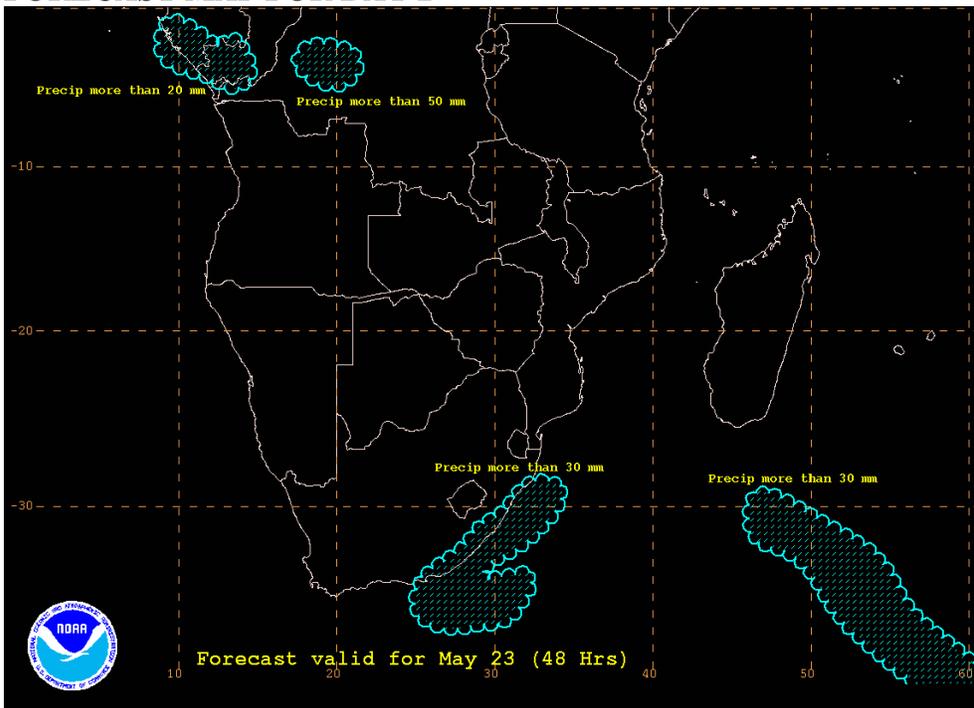
There is a huge spread between the ensemble products of the 50 mm isolines of 6 hourly total precipitations to the southeastern coast of South Africa, further south of the coast of Madagascar, central D.R. Congo, western Gabon and Congo Brazzaville up to T+54 hrs, which implies uncertainty in the intensity of precipitation over these areas.

The ensemble products show that the probability of 10 m wind speeds to exceed 30 KT over the areas which are to the south of 30°S latitude but to the east of 30°E longitude is 35 to 85% up to T+48 hrs.

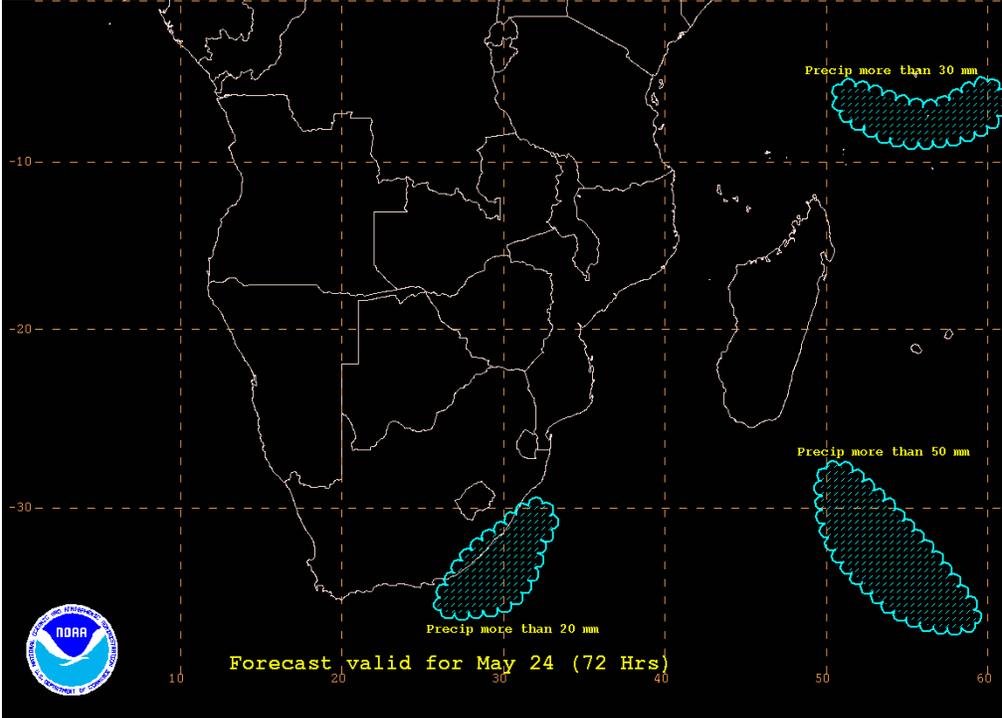
FORECAST MAP FOR DAY 1



FORECAST MAP FOR DAY 2



FORECAST MAP FOR DAY 3



Author:
Sérgio Buque: - Mozambique Meteorological Services and African Desk